

reply to the final Office Action. Therefore no petition and fee for extension of time are enclosed herewith.

Hereinafter the claims that were pending prior to the entry of the amendments in this response are called currently pending claims. This response cancels currently pending claim 2, amends currently pending claim 1, and adds new claims 19-21. Upon amendment the above identified US patent application will have 2 independent claims (amended claim 1 and new claim 21) and a total of 20 claims (amended claim 1, currently pending claims 3-18, and new claims 19-21). Applicant previously paid for 20 total claims and three independent claims. Therefore no fee for excess claims has to be paid with this response.

On page 2 of the Office Action mailed January 10, 2003 the Examiner rejects claims 1-18 under 35 U.S.C. 102(a or b) as being anticipated by Chemical Abstract 133: 267744, 133:185304, 133:164431, 133:59158, 132:85386, 131:352186, 130:282433, 128:210277.

Currently pending claim 1 and amended claim 1 of the present invention recite a polymeric material comprising alternate substituted fluorene and phenylene units as presented by the formula:

Formula 1: Poly [(R¹, R² - 2,7 - fluorene) - (2,5 - R³, R⁴ - 1,4 - phenylene)]

Chemical Abstract 133:185304 discloses a structure with 1,3-phenylene. Therefore the polymeric material according to claim 1 is not anticipated by this reference.

In the following Table 1 summarizes which polymeric material are disclosed in the seven references.

Table 1:

Reference	R ₁	R ₂	R ₃	R ₄
133:267744	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -
133:164431	CH ₃ (CH ₂) ₇ -	CH ₃ (CH ₂) ₇ -	H	H
133:59158	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -	H	H
132:85386	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ O- ₁₀	CH ₃ (CH ₂) ₅ O- ₁₀
131:352186	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ O- ₁₀	CH ₃ (CH ₂) ₅ O- ₁₀
130:282433	CH ₃ (CH ₂) ₇ -	CH ₃ (CH ₂) ₇ -	H	H
128:210277	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -	H	H

Thus, the seven references four different polymeric materials, which are summarized bellow in Table 2.

Table 2:

Polymeric Materials	R ₁	R ₂	R ₃	R ₄
1	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -	H	H
2	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -
3	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ -	CH ₃ (CH ₂) ₅ O-	CH ₃ (CH ₂) ₅ O-
4	CH ₃ (CH ₂) ₇ -	CH ₃ (CH ₂) ₇ -	H	H

Amended claim 1 carefully disclaims the polymeric material comprising alternate substitute fluorene and phenylene units in the positions R_1 , R_2 , R_3 , and R_4 as disclosed by the cited references (e.g., as summarized in Table 2). Consequently, the prior art does not disclose or suggest the polymeric material claimed in amended independent claim 1. Furthermore, the prior art does not disclose or suggest the polymeric material claimed in new independent claim 21.

All of the other claims (currently pending subclaims 3-18 and new subclaims 19 and 20) are nonobvious over the prior art at the very least because they are each directly or indirectly dependent on a nonobvious base claim (amended independent claim 1). All these subclaims are further nonobvious over the prior art because the prior art does not teach or suggest the particular features that are claimed in the subclaims. For example, the prior art does not teach or suggest a polymeric material having the R_1 and R_2 groups as defined in new subclaim 19; and the prior art does not teach or suggest a polymeric material having the R_3 and R_4 groups as defined in new subclaim 20.

Accordingly, reconsideration and examination of the present application is respectfully requested.

The application is now in condition for allowance. Allowance of the application at an early date is respectfully requested.

The Applicants reserve the right to seek protection for any unclaimed subject matter either subsequently in the prosecution of the present case or in a divisional or continuation application.

This response cancels currently pending claim 2, amends currently pending claim 1, and adds new claims 19-21. The cancellation, amendments and additions that are described in the preceding sentence were done to more fully claim the invention and/or to improve the wording of the claims, but were not necessarily done to overcome the

prior art, to overcome rejections under 35 U.S.C. § 112, or to overcome any other rejections or objections. The cancellation, amendments and additions that are described in the first sentence of this paragraph shall not be considered necessary to overcome the prior art; shall not be considered necessary to overcome any other rejections under 35 U.S.C. § 112; and shall not be considered necessary to overcome any other rejections or objections.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Post Office with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C., 20231 on

April 10, 2003

(Date of Deposit)

John Palmer


(Name of Person Signing)

(Signature)

April 10, 2003

(Date)

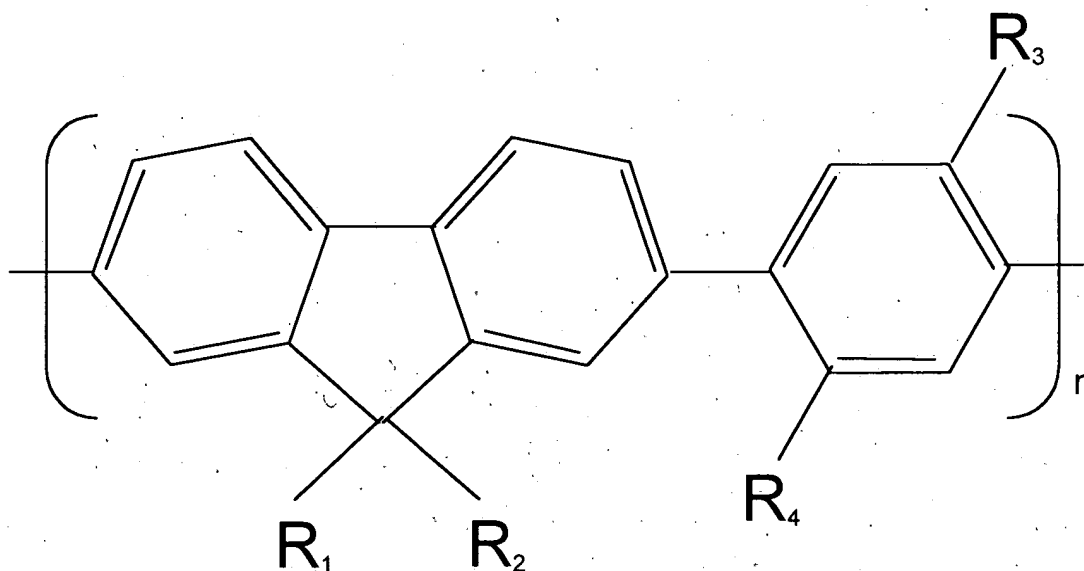
Respectfully submitted,


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Enclosures: Appendix A (1 page), Appendix B (1 page), and Appendix C (1 page)

Claim 1.

A polymeric material comprising alternate substituted fluorene and phenylene units, as represented by the following formula



wherein R_1 , R_2 , R_3 , and R_4 , which may be identical or different, are each H, a (C_1 - C_{22}) linear or branched alkyl, alkoxy or oligo (oxyethylene) group, a (C_6 - C_{30}) cycloalkyl group, or an unsubstituted or substituted aryl group; wherein n is from about 3 to about 5000;

wherein when R_1 and R_2 are both C_6 alkyl, then:

R_3 and R_4 are not both H,

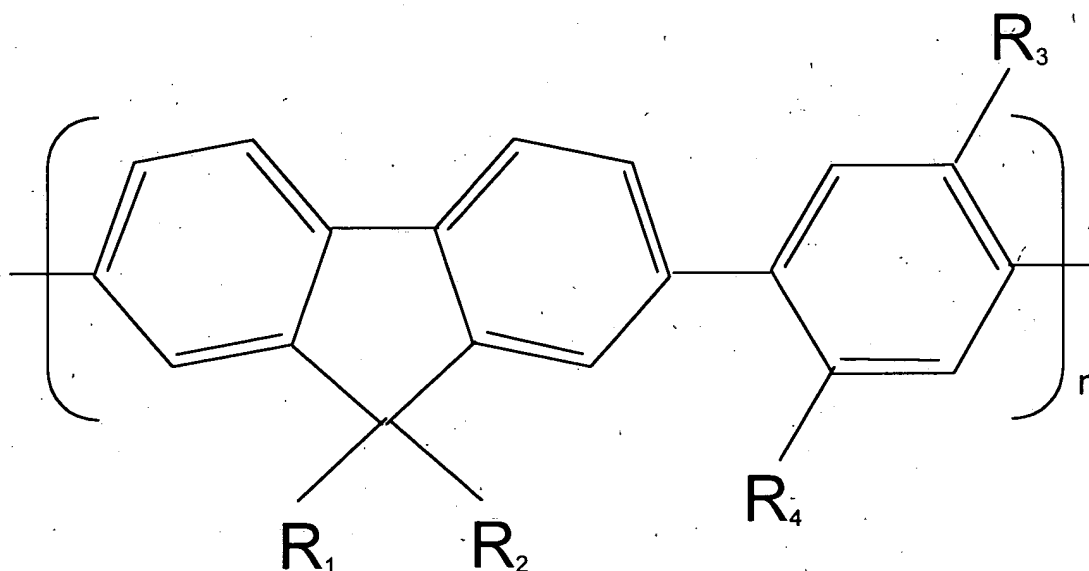
R_3 and R_4 are not both C_6 alkyl, and

R_3 and R_4 are not both C_6 alkoxy; and

wherein when R_1 and R_2 are both C_8 alkyl, then R_3 and R_4 are not both H.

Claim 1.

A polymeric material comprising alternate substituted fluorene and phenylene units, as represented by the following formula



wherein R₁, R₂, R₃, and R₄, which may be identical or different, are each [selected from the group consisting of] H, a (C₁-C₂₂) linear or branched alkyl, alkoxy or oligo (oxyethylene) group, a (C₆-C₃₀) cycloalkyl group, [and] or an unsubstituted or substituted aryl group[, and]; wherein n is from about 3 to about 5000[, and];
wherein when R₁ and R₂ are both C₆ alkyl, then:

R₃ and R₄ are not both H,

R₃ and R₄ are not both C₆ alkyl, and

R₃ and R₄ are not both C₆ alkoxy; and

wherein when R₁ and R₂ are both C₈ alkyl, then R₃ and R₄ are not both H.

Claim 19. A polymeric material as claimed in Claim 1, wherein R_1 and R_2 , which may be identical or different, are each H or a (C_1-C_{22}) linear or branched alkyl, alkoxy, or oligo (oxyethylene) group, or an unsubstituted or substituted aryl group.

22
Claim 20. A polymeric material as claimed in Claim 1, wherein R_3 and R_4 , which may be identical or different, are each a (C_1-C_{22}) linear or branched alkyl, alkoxy, or oligo (oxyethylene) group, a (C_6-C_{30}) cycloalkyl group, or an unsubstituted or substituted aryl group.

Claim 21. A polymeric material comprising Poly[(9,9-dihexyl-2,7-fluorene)-*alt-co*-(2,5-dioctoxyl-1,4-phenylene)].

54, Page 12
